



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: 400 M Street, N.E., PATENT AND TRADEMARK
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 889,229	09/26/2001	Klaus Mosbach	003300-804	9811

21839 7590 04/28/2003

BURNS DOANE SWECKER & MATHIS L L P
POST OFFICE BOX 1404
ALEXANDRIA, VA 22313-1404

EXAMINER

EPPERSON, JON D

ART UNIT

PAPER NUMBER

1639

DATE MAILED: 04/28/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/889,229

Applicant(s)

MOSBACH ET AL

Examiner

Jon D Epperson

Art Unit

1639

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other

DETAILED ACTION

Please Note In an effort to enhance communication with our customers and reduce processing time, Group 1627 is running a Fax Response Pilot for Written Restriction Requirements. A dedicated Fax machine is in place to receive your responses. The fax number is (703) 308-4315. A fax cover sheet is attached to this Office Action for your convenience. We encourage your participation in this Pilot program. If you have any questions or suggestions please contact Andrew Wang, Supervisory Patent Examiner, at (703) 306-3217. Thank you in advance for allowing us to enhance our customer service. Please limit the use of this dedicated Fax number to responses to Written Restrictions.

Please note: The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to **Group Art Unit 1639**.

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372. This application contains the following inventions or groups of inventions, which are not so linked as to form a single general inventive concept under PCT Rule 13.1.
 - I. Claims 1-15 and 20 are drawn to a method of producing molecularly imprinted microspheres.
 - II. Claim 16 is drawn to a method of using molecularly imprinted microspheres for separation.
2. In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

III Claims 17-19 are drawn to a product described as a biomimetic sensor, an affinity-labelled probe or a composite material comprising molecularly imprinted microspheres

3 The inventions listed as Groups I-III do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the reasons that follow:

4 PCT Rule 13.2 states that unity of invention shall be fulfilled when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. It further defines "special technical feature" as "those technical features that define a contribution which each of the claimed inventions, claimed as a whole, makes over the prior art."

5 The technical feature that links all of the claims is the molecularly imprinted microspheres. The groups lack unity because this technical feature is *known in the art* as disclosed by Ramstrom et al (Ramstrom, O.; Ye, L.; Krook, M.; Mosbach, K. "Screening of a combinatorial steroid library using molecularly imprinted polymers" *Analytical Communications* **January 1998**, 35, 9-11). This reference is described below.

6 Ramstrom et al (see entire document) discloses molecularly imprinted microspheres for the screening of combinatorial libraries prepared against androstenedione (see abstract, see also tables 1-2 and figure 1).

7 Therefore, the technical feature linking the inventions of groups I-III does not constitute a species technical feature as defined by PCT Rule 13.2, as it does not define a contribution over the prior art. Groups I-III are different in that the special technical feature of Group I is drawn to a library of compounds. The special technical feature of Group II is drawn to a method for producing a library of compounds. The special technical feature of Group III is drawn to a method for screening a library of compounds. Groups I and II are drawn to different methods with different method steps that require different reagents and will produce different results. Furthermore, Group III is not related to Groups I and II because Group III is drawn to a product whereas Groups I and II are drawn to unrelated methods because the special technical feature is known in the art (see above).

8 Accordingly, groups I-III are not so linked by the same or a corresponding special technical feature as to form a single general inventive concept.

9 Finally, see 37 CFR § 1.475 - Unity of invention before the International Searching Authority, the International Preliminary Examining Authority and during the national stage, cited in part below (especially sections (c) and (d)).

(a) An international and a national stage application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept (requirement of unity of invention).

Where a group of inventions is claimed in an application, the requirement of unity of invention shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression special technical features shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

(b) An international or a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories:

- A product and a process specially adapted for the manufacture of said product;
or
- A product and process of use of said product; or
- A product, a process specially adapted for the manufacture of the said product,
and a use of the said product; or
- A process and an apparatus or means specifically designed for carrying out the
said process; or
- A product, a process specially adapted for the manufacture of the said product,
and an apparatus or means specifically designed for carrying out the said
process

(c) If an application contains claims to more or less than one of the combinations of categories of invention set forth in paragraph (b) of this section, unity of invention might not be present.

(d) If multiple products, processes of manufacture or uses are claimed, the first invention of the category first mentioned in the claims of the application and the first recited invention of each of the other categories related thereto will be considered as the main invention in the claims. see PCT Article 17(3)(a) and § 1.476(c).

10 Groups I-III represent product, process of making and process of using. However, the technical feature that links the claims (molecularly imprinted microspheres) are known in the art, as set forth above. Thus, the instant claims lack unity of invention.

Species Election

11 This application contains claims directed to more than one species of the generic invention for Groups I-III. These species are deemed to lack unity of invention because they are not so linked to form a single general inventive concept under PCT Rule 13.1.

12. If applicant elects the invention of Groups I applicant is required to elect from the following patentably distinct species. Claim 1 is generic. Applicant must elect 1 species from each subgroup below.

Subgroup 1: Species of functional monomer (see claims 1 and 5-6)

Applicant must elect for purposes of search a single species of functional monomer. Furthermore, applicant must show all atoms and bonds that are necessary to define said functional monomer. Applicant should NOT use general notations like R^1 , R^2 , etc. when defining the structure because these labels represent more than one chemical group and thus more than one functional monomer would be erroneously elected. Please note that if more than one functional monomer is used in the reaction 1 (one) "representative" example must be elected. Furthermore, applicants must indicate whether the functional monomers have the same or different functionality (see claims 5-6).

Subgroup 2: Species of cross linker (see claim 1)

Applicant must elect for purposes of search a single species of cross linker. Furthermore, applicant must show all atoms and bonds that are necessary to define said cross linker. Applicant should NOT use general notations like R^1 , R^2 , etc. when defining the structure because these labels represent more than one chemical group and thus more than one cross linker would be erroneously elected. Please note that if more than one cross linker is used in the reaction 1 (one) "representative" example must be elected.

Subgroup 3: Species of print molecule (see claim 1)

Applicant must elect for purposes of search a single species of print molecule. Furthermore, applicant must show all atoms and bonds that are necessary to define said print molecule. Applicant should NOT use general notations like R^1 , R^2 , etc. when defining the structure because these labels represent more than one chemical group and thus more than one print molecule would be erroneously elected. Please note that if more than one print molecule is used in the reaction 1 (one) "representative" example must be elected.

Subgroup 4: Species of reaction solvent (see claim 1)

Applicant must elect, for the purposes of search, a single species of reaction solvent i.e., 1 (one) specific solvent must be elected.

Subgroup 5: Species of volume of polymerizable monomers (see claim 2)

Applicant must elect, for the purposes of search, a single species of volume of polymerizable monomers e.g., 1%.

Subgroup 6: Species of polymerization induction (see claim 8)

Applicant must elect, for the purposes of search, a single species of polymerization induction e.g., heat, UV, etc.

Subgroup 7: Species of polymerization process (see claim 9)

Applicant must elect, for the purposes of search, a single species of polymerization process e.g., free radical.

Subgroup 8: Species of microsphere size adjustment process (see claims 10-11)

Applicant must elect, for the purposes of search, a single species of microsphere size adjustment process (e.g., adjusting composition of the functional monomer)

Subgroup 9: Species of microsphere size (see claim 13)

Applicant must elect, for the purposes of search, a single species of microsphere size e.g., 1 μ m.

Subgroup 10: Species of microspheres (see claim 14)

Applicant must elect, for the purposes of search, a single species of microspheres e.g., monodisperse.

Subgroup 11: Species of screening purpose (see claim 15)

Applicant must elect, for the purposes of search, a single species of screening purpose e.g., catalysis.

13. If applicant elects the invention of Groups II applicant is required to elect from the following patentably distinct species. Claim 16 is generic. Applicant must elect 1 species from each subgroup below.

Subgroup 1: Species of separation (see claim 16)

Applicant must elect, for the purposes of search, a single species of separation e.g., CE, HPLC.

Subgroup 2: Species of use (see claim 16)

Applicant must elect, for the purposes of search, a single species of use e.g., stationary phase or modifier.

Subgroup 3: Species of molecularly imprinted microsphere (see claim 16)

Applicant must elect for purposes of search a single species of molecularly imprinted microsphere. Furthermore, applicant must show all atoms and bonds that are necessary to define said molecularly imprinted microsphere. Applicant should NOT use general notations like R¹, R², etc. when defining the structure because these labels represent more than one chemical group and thus more than one molecularly imprinted microsphere would be erroneously elected. Please note that if more than one molecularly imprinted microsphere is used in the reaction 1 (one) "representative" example must be elected. Furthermore, applicants must show any other structures that are attached to the imprinted microsphere.

14. If applicant elects the invention of Groups III applicant is required to elect from the following patentably distinct species. Claim 17 is generic. Applicant must elect 1 species from each subgroup below.

Subgroup 1: Species of molecularly imprinted microsphere (see claim 17)

Applicant must elect for purposes of search a single species of molecularly imprinted microsphere. Furthermore, applicant must show all atoms and bonds that are necessary to define said molecularly imprinted microsphere. Applicant should NOT use general notations like R¹, R², etc. when defining the structure because these labels represent more than one chemical group and thus more than one molecularly imprinted microsphere would be erroneously elected. Please note that if more than one molecularly imprinted microsphere is used in the reaction 1 (one) "representative" example must be elected. Furthermore, applicants must show any other structures that are attached to the imprinted microsphere.

Art Unit 1639

15. The species listed above do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, the species lack the same or corresponding special technical features for the following reasons:

16. PCT Rule 13.2 states that unity of invention shall be fulfilled when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features". It further defines "special technical feature" as "those technical features that define a contribution which each of the claimed inventions, claimed as a whole, makes over the prior art". For example, unity of invention is fulfilled if:

- (a) all alternatives have a common property, **and**
- (b) (i) a common structure is present, i.e. a significant structural element is shared by all alternatives, or
- (b) (ii) in cases where the common structure can not be the unifying criterion, all alternatives belong to a recognized class of compounds in the art to which the invention pertains. (MPEP 1850).

17. In the instant case, the species listed in the subgroups above do not have a common structure and/or a common property and/or do not belong in a common class.

For these reasons, election under these rules is proper and required.

18. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

19 Applicant is advised that a reply to this requirement *must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added*. An argument that a claim is allowable or that all claims are generic is considered *nonresponsive* unless accompanied by an election.

20 Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, *applicant must indicate which are readable upon the elected species*. MPEP § 809.02(a)

21 Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143). Because the above restriction/election requirement is complex, a telephone call to applicants to request an oral election was not made. See MPEP § 812.01.

22 Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

23 Applicant is also reminded that a 1 - month (not less than 30 days) shortened statutory period will be set for response when a written requirement is made without an action on the merits. This period may be extended under the provisions of 37 CFR 1.136(a). Such action will not be an "action on the merits" for purposes of the second action final program, see MPEP 809.02(a).

24 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jon D. Epperson, Ph.D., whose telephone number is (703) 308-2423. The examiner can normally be reached Monday through Friday from 8:30 to 4:30 p.m.

25 If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang, can be reached on (703) 306-3217. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-4242. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Jon D. Epperson, Ph.D.
April 23, 2003

